Department of Natural Resources



Fiscal 2018 Agency Technology Plan

Submitted March 2018

Table of Contents

Overview	
FY 2018 Top Five IT Goals	
Agency Projects	5
IT Infrastructure Projects or Expenditures	11
Windows 10	11
Office 365	11
Badgernet	12
VOIP	12
Active Directory Migration	13
IT Contractors	13
Cybersecurity	13
Agency Portfolio Assessment	13
Additional Issues or Activities	1.4

Overview

Department of Natural Resources (DNR) is dedicated to the conservation, protection, effective management, and maintenance of Wisconsin's natural resources. DNR is responsible for implementing the laws of the state and, where applicable, the laws of the federal government that protect and enhance the natural resources of our state. DNR is charged with the responsibility for coordinating the many disciplines and programs necessary to provide a clean environment, and a full range of outdoor recreational opportunities for Wisconsin citizens and visitors.

Information technology (IT) influences every activity in daily operation of the DNR and its lines of business (programs). Our many disciplines add complexity to managing our technology environment. Our customers have high expectations and their roles vary from citizens, accountants, biologists, scientists, statisticians, technicians, engineers, law enforcement, project managers, program managers, customer support, tribes, and other governmental organizations. Integration of DNR business and IT strategic planning processes ensures alignment of IT directions with business goals. The strategic information technology plan should be viewed in context of the Department's business plan. It serves as our roadmap for leveraging technology in our business processes and is intended to guide the development of more detailed implementation plans. As IT improves, DNR will be able to perform our mission increasingly effectively. Leveraging technology in our business processes requires:

- Complete understanding of the Department's mission
- Employment of best business practices
- Implementation of structured and standardized architectures
- Process-driven business and systems development
- Partnership with all stakeholders
- Clarity of the business requirements
- Effective management and protection of information as a strategic resource

FY 2018 Top Five IT Goals

DNR's strategic goals serve as guideposts for IT resource investments, and are consistent with the statewide enterprise initiatives. The goals are intended to work in concert with each of the Division's goals and strategic plans. They establish performance measures in four target areas:

- 1) Economic development
- 2) Reform and innovation
- 3) Efficient and effective services
- 4) Customer/taxpayer satisfaction

Key IT goals for the DNR in FY 2018 include:

PeopleSoft ERP Investments

Working with the current feature set of the statewide finance and human resource system is expected to consume significant agency resources, pending future enhancements.

Staff Technology Enhancements

Ensuring that all DNR staff have sufficient access to IT services to meet business needs. This priority helps strike a balance between investments in resource-consuming new technologies, and in addressing existing IT needs.

Electronic Services Enhancements

Increasing use of technology tools to reduce manual processes, especially those used by our external customers. Technologies such as electronic signatures and electronic payments can increase ease of use for our customers, reduce turnaround times, reduce manual processes and error, and enable improved and broader reporting.

Content Management Strategy

Management of documents, records, digital assets (photos, videos, audio files), and web content is a significant undertaking which can be addressed holistically, or piecemeal. This priority helps ensure that our approach improves the storage and retrieval of these agency assets in the most cost-effective manner meeting the needs of the agency.

Improved Workforce Mobility

The increasing use of consumer electronics has raised expectations for technology solutions in the workplace. This priority focuses attention on mobile technologies and the resources required to deliver them effectively, consistently, and securely.

Agency Projects

The following IT projects expected to cost \$1,000,000 or more, or are otherwise high profile. This includes projects that are starting, ongoing or ending anytime between July 1, 2018 and June 30, 2019.

Customer and Outreach Services

1) Project Name: Go Wild			
2) Project Type: New 🛛 Ong	oing		
Project Description:			
Continued build-out of the Go Wild			
expected to complete in FY2018 with	h IT impact include the deploy	yment of SSRS to allow for self-s	ervice data extraction,
reporting, and real time statistics; de	velopment of commercial lice	nsing module, moving collection	and storage from Access
databases; integration of imaged app			
management (COS would be highly	-		
, , , , , , , , , , , , , , , , , , ,		F	
4) Project Schedule	Start:	Expected Completion:	
, ,			
	☐ Mainframe	⊠ Web	Client-Server
65 A. F. 47 - DI 46	-	_	
5) Application Platform:	Physical	☐ Virtual	
	-		
	In-house	-	
		☐ COTS	☐ SaaS
	Developed		
6) Application Type:	•		·
	☑ Vendor	C Othor (manife)	
	Managed/hosted	Other (specify)	
7) Technical Architecture Compor	ients:		
Virtual server environment including	g web, application, and databas	se cluster. Network including DM	Z.
8) Estimated Total Project Hours:		8a.) Estimated Total Project Co	st: \$0
9) Related Projects and Dependen			
10) Project Sponsorship and Fundir			
Executive Sponsor: Kurt T	hiede Divisio	on: Dept. Secretary	
		7770	
Business Sponsor: Mark A	Aquino Divisio	on: BESS	
	Ym 4 d t		
Senior Project Manager: Mark Ra	ppe IT Authority:		
Is Full Funding for Project Approved/Secured? 🛛 Yes 🔲 No			
Funding Course for the Design GDD & GDD & GEG &			
Funding Source for the Project: GPR \$ SEG \$			
□FED\$			
Project is funded by transaction fees collected, therefore build is \$0.			
11) Issues that may influence successful execution of the project:			
11) 133003 that thay arranged successful execution of the project.			

1) Project Name: Call Center Anywhere to Genesys Migration				
2) Project Type: New FY18	Ongoing			
3) Project Description:				
Customer & Outreach Services will migrate from Call Center Anywhere to the new enterprise service offering for automated call distribution, Genesys.				
The DNR has been involved in	the initial high-level, multi-	agency planning and informati	onal meetings. The	
DNR's implementation is sched	uled to begin in December	of 2017, and to be completed b	y February of 2018.	
4) Project Schedule	Start of Implementation: Dec 2017	Expected Completion no later than: Feb 2018		
	Mainframe	☐ Web	Client-Server	
5) Application Platform:	Physical	☐ Virtual		
	☐ In-house			
	Developed	COTS	☐ SaaS	
Application Type:	☐ Vendor Managed/hosted	☐ Other (specify) Vendor software, DOA-hosted		
7) Technical Architecture Compo	nente: DET Provided			
7) rediffical Ardifficture Compe	ments. DET Flovided			
8) Estimated Total Project Hours	· · · · · · · · · · · · · · · · · · ·	8a.) Estimated Total Project Co	st:	
a. Implementation hour		a. Implementation		
a. Implementation cools.				
9) Related Projects and Depender a. Ability of vendor and		ich provides, at a minimum, the fe	atures currently used in Call	
		agencys' implementations being c	arried out on time.	
10) Project Sponsorship and Fundi				
Executive Sponsor: Kimb	erly Currie	Division: External Services		
Business Sponsor: Susan	Cook	Division: External Services		
Senior Project Manager: Kathy	Bryant IT Aut	hority:		
Is Full Funding for Project Approved/Secured?				
Funding Source for the Project:				
☑GPR \$_150,000** □PR \$ □SEG \$ □FED \$				
**This will be the annual cost based on monthly recurring service charges billed by DET.				
11) Issues that may influence successful execution of the project:				
a. DET ability to meet the agency implementation timeline b. Unknown costs				
c. Incompatible equipment				
d. Training availability (videos, online materials, classroom, etc)				
e. Loss of funding				

Law Enforcement

Business Critical Projects (under \$1m)

Project Name: DEARS application maintenance and improvement including PeopleSoft code translation				
2) Project Type: New FY18	Ongoing			
3) Project Type: New FY18 Ongoing 3) Project Description: The DEARS application was formerly Law Enforcement's primary time, activity and expense record management software. The PeopleSoft STAR program has replaced DEARS as the primary application for this purpose. However, DEARS still allows LE staff to record specific LE activity information and LE staff still use it to keep track of these items. Due to their familiarity with DEARS and its hopefully continued ability to export mileage information to the AVOR system, we would like to continue to maintain and improve DEARS into the foreseeable future, including adding the ability to translate code information from DEARS to its related PeopleSoft code.				
4) Project Schedule	Start: 7/1/16	6 Expected Completion: 6/30/18		
	Mainframe	☐ Web	☐ Client-Server	
5) Application Platform:	Physical	☐ Virtual		
6) Application Type:	☑ In-house Developed	□ cots	☐ SaaS	
	☐ Vendor Managed/hosted	Other (specify)		
7) Technical Architecture Components: Visual Basic Client with front end MS Access Data, served to central Oracle database (schema X30491)				
8) Estimated Total Project Hours: 40 8a.) Estimated Total Project Cost: 2600				
9) Related Projects and Dependencies: PeopleSoft, AVOR				
10) Project Sponsorship and Fundin				
Executive Sponsor:	Divisio	n; Law Enforcement		
Business Sponsor; Division: Law Enforcement				
Senior Project Manager: Mark Burmesch IT Authority: Jeff Schuetz/Corey Robinson				
Is Full Funding for Project Approved/Secured? 🛛 Yes 🔲 No				
Funding Source for the Project: GPR \$ PR \$ SEG \$2600				
□FED \$				
11) Issues that may influence successful execution of the project: Coding changes in PeopleSoft that occurs to quickly to realistically maintain translation within DEARS, the continued use of the AVOR system and the ability to export and upload DEARS information into it.				

Project Name: TraCS 10 (BadgerTraCS) and MACH (Mobile Architecture Communication Handling) Improvements				
2)	Project Type: New FY18 🗵	Ongoing		
3) Project Description: TraCS 10 is currently Law Enforcement's electronic citation application and MACH is our automatic vehicle location, communication, and TIME System request application. These applications will continue to be improved during FY18 including the introduction of Web Services for TraCS 10, RMS for TraCS 10, and the Call For Service extension for both MACH and TraCS 10. These applications are being included in a single project because they have the same developer and we collaborate both with the WI State Patrol.				
4)	Project Schedule	Start: 7/1/16	Expected Completion: 6/30/18	
-\		☐ Mainframe	⊠ Web	☑ Client-Server
5)	Application Platform:	☐ Physical	☑ Virtual	
6)	Application Type:	☐ In-house Developed	Сотѕ	☐ SaaS
о) Аррисаной Турс.		☑ Vendor Managed/hosted	Other (specify)	
7)	Technical Architecture Compon			
.NE	Γ front end with proprietary data	compression/encryption. SQI	L 2012 virtual server, dedicated fi	le storage, web server
8)	Estimated Total Project Hours: 80 8a.) Estimated Total Project Cost: \$5-10K			
9) Related Projects and Dependencies: DET Virtual Server, access to Web Server, firewall ACLs				
	Project Sponsorship and Funding	g (please complete the informa	ation below)	
E	Executive Sponsor:	Divisio.	n: Law Enforcement	
Business Sponsor: Division: Law Enforcement				
Senior Project Manager; Mark Burmesch IT Authority: Jeff Schuetz/Corey Robinson				
Is Full Funding for Project Approved/Secured? 🛛 Yes 🔲 No				
Funding Source for the Project: GPR \$ PR \$ SEG \$10000				
□FED \$				
11) Issues that may influence successful execution of the project:				
Prote	Protocols allowing SQL Server to access Web Server at DET			

Project Name: Identify, test, and possibly purchase voice recognition software (i.e. Dragon Naturally Speaking)				
2)	Project Type: New FY18	Ongoing		
2) Project Type: New FY18 Ongoing 3) Project Description: We have had a small group of Law Enforcement Wardens testing voice recognition software. Specifically, they have tested Dragon Naturally Speaking with the use of a headset. Every warden that uses or has tested this software has found it to increase productivity and make case reporting and other paperwork easier to complete, in many instances allowing them to include a high level of detail in such reports. LE has only tested the capability that the Home Version of this software includes, but unfortunately the developer (Nuance Communications) has maintained that we need the Enterprise Version of this software per their EULA. The Enterprise Version is currently too costly for LE to continue to explore and are therefore looking into other options and also continue to seek the ability to use the Home Version of Dragon program-wide via custom EULA. We also hope to come to an agreement on the cost of the Enterprise Version if that continues to be required. This project may not be implemented in FY18.				
4)	Project Schedule	ect Schedule Start: 10/1/16 Expected Completion: 6/30/18		
		☐ Mainframe	☐ Web	Client-Server
5)	Application Platform:	Physical	☐ Virtual	
6) Application Type:	Application Type:	☐ In-house . Developed	COTS	☐ SaaS
	☑ Vendor Managed/hosted	Other (specify)		
7) Technical Architecture Components: .NET front end with proprietary data compression/encryption. SQL 2012 virtual server, dedicated file storage, web server				
8)	8) Estimated Total Project Hours: 80 8a.) Estimated Total Project Cost: \$5-10K			
	Related Projects and Dependence			GALLS
	Project Sponsorship and Funding executive Sponsor:		ation below) on: Law Enforcement	
Executive Spoilsor. Division, Law Emorcement				
Business Sponsor: Division: Law Enforcement				
Senior Project Manager: Mark Burmesch IT Authority: Jeff Schuetz/Corey Robinson				
Is Full Funding for Project Approved/Secured?				
Funding Source for the Project: GPR \$ DPR \$ DSEG \$ 10000				
FED \$				
11) Issues that may influence successful execution of the project: Licensing requirements, application cost				

Potential Agency Projects

The following lists all potential agency IT projects expected to meet the \$1,000,000 cost threshold that are in the conceptual phase, or that might be initiated in FY18 due to potential legislative changes (state or federal), or that might be dependent on securing grant funding (from a state, federal or nongovernmental organization).

The DNR has not identified any potential projects at this time.

IT Infrastructure Projects or Expenditures

Describe any projects or anticipated expenditures over \$100,000 related to augmenting IT infrastructure

Windows 10

Windows 10 is Microsoft's most recent desktop operating system, which will interact with modern IT systems more effectively, support the latest versions of applications, allow staff to take advantage of the most recent enhancements, and keep the agency running a vendor-supported version that will be patched for security vulnerabilities for the longest amount of time currently available. BTS has a policy of staying on "the current version or one version back".

Microsoft has made repeated announcements regarding support limitations of Windows 7 on current and future hardware, specifically processors.

Implementation will begin in May 2017, and the goal is to have 80% of standard workstations migrated by the end of October, 2017. The remaining workstations will be scheduled and completed after October.

Office 365

DNR has a project charter to start migrating to the DET service offering Office 365. The project does not presently have dates defined beyond the planning phase, but a target implementation start will begin in May 2017, and the goal is to have 80% of standard workstations migrated by the end of October, 2017.

- DNR has assessed the use cases and subscription types to determine costs and benefits associated with Office 365 and approval was gained from the Agency's Operations Management Team;
- Rollout of client side software and configuration to be done in parallel with the Windows 10 project;
- Anticipate Skype for Business and Exchange migration in 2017, after rollout of prerequisite software is completed;
- Implementation timeline will be determined by work effort required, and other projects as prioritized. DNR/DET roles are currently in negotiation.

Our expectation is that we will see cost savings and features enhancements, leading us to migrate to the new service offering at the earliest opportunity.

Badgernet

DNR will be implementing the new statewide Badgernet network during calendar year 2017. The project has started, with the delivery of site planning documents in October of 2016. Implementation is to be complete by December of 2017.

This project will bring much improved bandwidth to many DNR sites, albeit with significantly increased cost for remote sites.

VOIP

DNR will be planning for the implementation of Voice Over IP (VoIP) as the new telephony and unified communications infrastructure standard, as a replacement for current standard land lines and Centrex, wherever feasible. VoIP provides more features and integration, and the potential for reduced costs overall.

VoIP is also dependent on the Badgernet project, its ability to move forward on time, and the additional bandwidth it offers at various locations will also have an impact on the implementation of VOIP.

When the DNR elects to move forward with VoIP, the implementation schedule will approximate:

- Planning with DET 3 months
- Technical Survey of DNR Sites 3 months
- Rollout 6 months

Active Directory Migration

The Department of Natural Resources has active projects to migrate from Windows 7 to Windows 10, and to migrate to Office 365. The timelines for the above are to have an 80% completion rate on Windows 10 by the end of October 2017, and to have phase 1 of a multi-phased project for Office 365 complete by the same timeline. In phase 2, The DNR will be assessing the non-critical applications within Office 365 for implementation. Upon completion of phase 2, we will then begin planning for the Active Directory migration with a view to start this in the second or third quarters of calendar year 2018.

IT Contractors

The Department of Natural Resources does maintain a limited number of IT contractors in support IT projects or programs, for which the above monetary threshold may be reached.

Cybersecurity

DNR Technology Services has begun conducting annual Information Security Risk Assessments, which are completed each October. We are beginning annual mitigation/implementation cycles to respond to the identified areas of agency risk. Specific measures for FY18 include:

- Participation in the Cyber Security Awareness Training to be offered by DOA/DET, beginning on October 2016 and running for 2 years.
- Filling a security technician vacancy.
- Encrypt all agency desktop and laptop computers, approved by senior management in January of 2016.
- Retool account management procedures as DNR transitions from the legacy HR database to PeopleSoft.
- Retool account management procedures as DNR moves to Office365.
- Work with the Systems Management Section to implement centralized security logging.
- Provide more security oversight to new applications development and software and IT infrastructure acquisitions.

Agency Portfolio Assessment

The DNR is waiting for further direction and clarification from DET, and has not yet begun an effort to establish an agency applications portfolio, and the surrounding governance framework. This effort has been hampered in part due to the vacancies in the Bureau of Technology Director and Deputy Director positions, and in part due to other priorities.

Additional Issues or Activities

DOA/DET Support of Services and Projects

While DNR has been supportive of DET's shared services and projects, we feel that there has been insufficient investment made in resources needed to implement new services. The Genesys and VoIP projects had gone without project managers for long periods, for example. The lack of a clear implementation roadmap for Office 365 has also been a hindrance.

STAR Reporting

Lack of adequate reporting from PeopleSoft has been a significant hindrance in budget management and time reporting.

Identity Management

Lack of interoperability between user identity authentication and management systems at DNR, DOA, and in the cloud create unnecessary overhead for every individual at DNR.

DNR Staffing

The DNR has had vacancies in its Bureau of Technology Services Bureau Director and Deputy Director positions since the summer of 2016. In other areas, the DNR is challenged to hire and retain highly qualified IT staff due to the competitive market for this talent, DNR's below-market salaries, and a limited ability to offer salary increases and other incentives.

Federal Funding

Unforeseen changes in Federal funding could have a detrimental impact on the ability to build and maintain applications supporting programmatic needs.

DNR Alignment

The DNR's work on alignment began approximately 18 months ago, and is now in the process of being enacted. The goal of alignment is to organize business areas around their core functions in order to maximize efficiencies and effectiveness. In early FY18, the work to implement the alignment changes will continue to be underway, and will require significant DNR resource hours.

Division of Forestry

There currently exists uncertainty on priorities and impacts from organizational changes that the DNR and the Division of Forestry will be facing in FY18. The DNR is in the midst of preparing for the implementation of the agency's alignment efforts, and has identified a number of systems/applications that will potentially be impacted as a result of the upcoming changes.

Forestry managers and staff are working to gain clarity on the impacts of the organizational decisions, and on identifying and prioritizing the changes needed to the variety of systems and applications.

Given the above, Forestry at this time, is not able to identify the potential projects for FY18. It is anticipated that most of the work in FY18 will be smaller modifications to existing systems in order to align systems with the organizational changes. We understand there will be changes needed to the Wisconsin Forest Inventory & Reporting System, both on the Public as well as Private Lands applications, as well as other applications, but cannot, at this time, provide project level details.

DNR's Mission

To PROTECT and enhance our natural revources:

our air, land and water-

our witalife, fish and forests

and the ecosystems that sustain all life.

To PROVIDE a healthy, sustainable environment

and a full range of outdoor opportunities.

To ENNURE the right of all people

to use and enjoy those resources

in their work and leisure.

To WORK with people

to understand each other's views

and to carry out the public will.

And in this parmership

consider the future

and generations to fallow.

This plan is submitted by the Wisconsin Department of Natural Resources (DNR). Preparation of this plan was coordinated by the DNR Bureau of Technology Services (BTS), with input from other DNR program application and data owners.

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Secretary's Signature and Date

Cathy Stepp
DNR Secretary